(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 April 2001 (19.04.2001)

PCT

(10) International Publication Number
WO 01/27830 A1

(51) International Patent Classification[7]: G06F 17/60

(21) International Application Number: PCT/US00/27539

(22) International Filing Date: 5 October 2000 (05.10.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/414,783 8 October 1999 (08.10.1999) US

(71) Applicant: MOTOROLA INC. [US/US]; 1303 East Algonquin Road, Schaumburg, IL 60196 (US).

(72) Inventors: D'AVELLO, Robert, F.; 1281 Thorndale Lane, Lake Zurich, IL 60047 (US). NEWELL, Michael, A.; 425 Lakewood Drive, Williams Bay, WI 53191 (US). MARK, Kelly, S.; 500 Wildspring, Round Lake, IL 60073 (US). WANG, Dan; 7050 Arbor Lane #304, Northfield, IL 60093 (US).

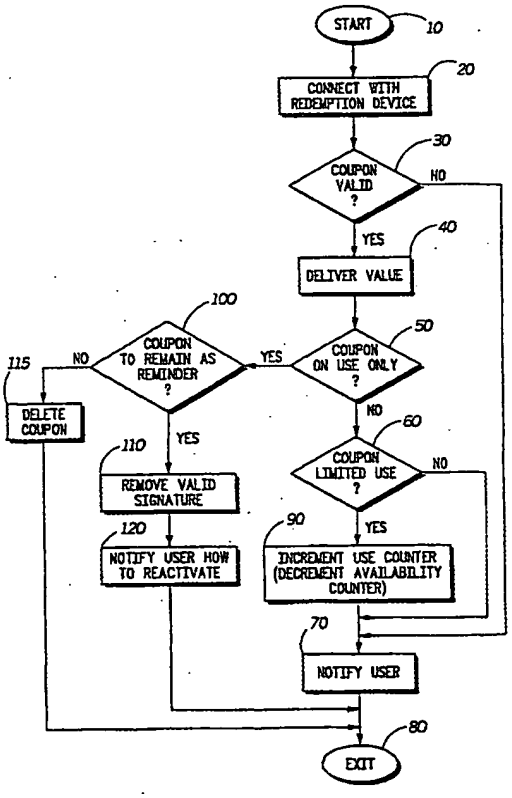
(74) Agents: KING, John, J. et al.; Motorola Inc., Intellectual Property Dept., 1303 East Algonquin Road, Schaumburg, IL 60196 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,

[Continued on next page]

(54) Title: REMOTELY CONFIGURABLE MULTIMEDIA ENTERTAINMENT AND INFORMATION SYSTEM WITH ELECTRONIC COUPONS



(57) Abstract: This invention relates to providing advertising and electronic coupons (30) within a multimedia entertainment and information system, such as an internet radio for portable applications and uses, as in an automobile. The internet radio allows access to a host of audio, visual, and other information. Normal radio channel function is provided along with programmable content and channel selection, as well as automatic content and channel updating by location and style. Internet access is also provided. Direct or targeted advertising, as well as electronic commerce is supported. Connection to the internet is through wireless communications. Programmability is achieved off-line via a web page and remote computer. Customized information is also communicated to the radio such as stock quotes, travel information (250), advertising, and e-mail. Onboard global positioning allows for channel updating by location, traffic information, geographic advertising (460), and available similar content.

WO 01/27830 A1

IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *With international search report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

REMOTELY CONFIGURABLE MULTIMEDIA ENTERTAINMENT AND INFORMATION SYSTEM WITH ELECTRONIC COUPONS

BACKGROUND OF THE INVENTION

In the past, coupons were delivered to consumers in paper form by a variety of methods. Some examples include: the newspaper carried advertising sections; coupons were printed on pages of magazines and newspapers; coupons were direct mailed to homes either individually or in advertising flyers or packets; and coupons were printed directly on product packages or literature. The technology exists that allows vendors to send coupons to customers electronically.

One method that has already seen usage is the creation of coupons on electronic web pages. To redeem one of these coupons, the user accesses the appropriate page with his web-browser, then prints the coupon on his printer. He then redeems the printed coupon in the traditional manner, such as taking it to the retailer and using it the at time of purchase of the requested product or service to receive a discount.

With the advent of modern wireless telecommunications equipment, users are typically found to have one or more wireless communications devices with them as they go about their daily lives. Users are being given the ability to wirelessly access a source of electronic coupons from wherever they are located. Users do not typically have with them the ability to print the coupons, however.

Another problem with the present use of electronic coupons is that of controlling the redemption of the coupons. A coupon accessed via a web page and printed could be duplicated countless times, which may not be the intent of the retailer. Also, in the existing art, copies of the coupon could be given, traded, or sold to other individuals. The retailer has very little control over this use of its coupons, and is thus limited today.

Other known forms of electronic discounting of purchases include merchant preferred customer cards. A merchant may have a preferred customer card with a bar code on it that is given to some customers. Periodically, items are discounted and a flyer is sent to the home of the customer indicating the items that

are on sale. At checkout, the card is scanned before the items that are being purchased. The discount is automatically applied as the items are rung up. Purchasing habits information can also be retained.

Personal handheld digital assistant devices also are known to include a bar code scanner that can be used to enter a grocery list. A master grocery list of items purchased over last 3 months is editable by the user and can be downloaded to a device that has an electronic shopping cart. The device can manually copy from the master list to the shopping cart. The device can scan an item's barcode off of the item to put in the shopping cart. The device can also scan the item's bar code from the master list of items. Also, the merchant can send weekly electronic notifications to users including sales flyers that include barcodes of sale items. Items can be scanned from that sheet. The device synchronizes with the user's computer and appropriate web site. A current price list and master list are sent to the device, and the shopping cart contents are sent to the web site.

As advertising has become prominent in society, advertisers have sought additional means to reach their audience. In addition, the desire of advertisers to reach a target audience has increased and the field of advertising has become more competitive Accordingly, there is a need for more effective forms of advertising.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a flow chart showing one presently preferred method of coupon redemption.

FIG. 2 is a flow chart showing one presently preferred method of coupon validation.

FIG. 3 is a flow chart showing one presently preferred method of background routines.

FIG. 4 is a flow chart showing one alternate method of transaction redemption.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS OF THE INVENTION

In the text which follows, the term user refers to the user of the e-coupon system. This typically would be an actual user of the system and this model is assumed throughout this discussion. Alternatively, this could be the device which holds the e-coupons for the user, an automated program acting as an agent for the user, or an automated program that interfaces with the remainder of the embodiment on behalf of one or more users.

The term merchant or vendor refers to the entity which has the value and creates the offer. The term system refers to the electronic system that can create or forward e-coupons on to users. In the presently contemplated embodiments of the invention, this could be a computer, an interconnected system of computers and transactors, or software residing on an existing computer system. System is also used to refer to the provider of the service.

Transfer Methods

In the existing art, the coupon itself is physically transferred to the user. As explained previously, an image of the coupon (such as a bitmap file) can be electronically delivered to the user and then printed by the user. In either case, the user has a physical coupon that is then redeemed by the user. In contrast, the electronic coupon of the invention (e-coupon) itself needs a secure transport that will protect the e-coupon when being transferred to the user's device from the system, when being transferred to another user, when being redeemed (transferred to a redemption terminal or back to the system) and when updates are done between the user's terminal and the system. The transport should also be able to ensure that there is one and only one copy of the e-coupon.

When an e-coupon is transferred, the system preferably should ensure that the coupon is at either the destination or the source, but not both. Just as important as ensuring that there are not more than one e-coupon when the transfer is complete, the system should also preferably ensure that the e-coupon is not lost if there is a disruption of communications during the transfer. Transports which

meet these criteria exist. More are being developed and deployed now as e-commerce is becoming more popular.

The method also preferably uses 2-way authentication to determine that if some amount of value is to be transferred to/from a user device, a need to verify that destination is in fact who they say they are exists. It is not necessarily required that a need to verify the source exists. In the presently preferred embodiment, the method uses a merchant code as a public key in a public/private key encryption system, or generates a message digest in a manner generally known in the art. Accordingly, part of coupon is sent in clear and part is sent encrypted. This allows the merchant code to be seen; the clear data is sent in digest form to ensure that it has not been tampered with.

E-Coupon Format

As described in further detail below, certain fields of information are desirable to include in the e-coupon. As shown above, not all of these fields are required by all e-coupons. In the preferred embodiment, the fields are optional parameters that are part of the overall digital structure of the e-coupon. In the preferred embodiment, each of the included optional parameters would consist of a code for the parameter, a field for the length of the parameter, and the data for the parameter.

It is possible that some parameters could be further subdivided to include optional sub-fields. In the preferred embodiment, the format for the parameter is as described above. The sub-parameters are contained in the data portion of the parameter field. Each of the sub-parameters would contain a sub-parameter code field, a field for the length of the sub-parameter, and the data for the sub-parameter.

The preferred embodiment also contemplates both defined parameters and undefined parameters. Defined parameters are those that all devices must understand. In an alternate embodiment, the devices also might have to be able to act on defined parameters. Undefined parameters have meaning for this coupon or

merchant (or anyone else), but the device does not need to understand them and they would not have to be included in an e-coupon standard.

Usage Control

For some e-coupons, very little control over coupon redemption is required. Similar to coupons appearing in the newspaper or sales flyers, having an expiration date for the e-coupon is a sufficient means of control. In the preferred embodiment, an expiration date field is thus added to the e-coupon. It is then possible to display the date for the user upon request. Additionally, the date could be used to automatically delete the e-coupon from the user's device's memory once the coupon had expired.

In addition, another field indicating the beginning date of redemption period is added to the e-coupon. In this manner, the e-coupon could be delivered in advance to the user's device. It is possible for the user to set his device so that e-coupons that are not yet "active" do not display on the device. Alternately, the e-coupon could be made to appear upon user request, for example, by selecting "upcoming coupons" from a menu listing.

Another method of handling the expiration date is to simply provide the date in the e-coupon in a format that is directly viewable by the user and the merchant. For example, if the e-coupon is ASCII text based, text such as "expiration date: March 1st, 1999" could be part of the e-coupon text. Alternately, if the e-coupon is a binary image, such as a GIF or JPEG file, the expiration date can be part of the image.

For some e-coupons, it may be desirable to enable the coupon during a specific window of time. For example, McDonald's may wish to provide a discount on Big Mac's between 1 PM and 3 PM. In this case, a Time Window Parameter field is included in the e-coupon. This information can be used to enable the e-coupon in the active e-coupons list on the user's device. It is also desirable for the user to be able to trigger an alarm on his device based on the time listed in the e-coupon. The user is reminded by the alarm to go to the merchant's location to redeem the e-coupon.

For some e-coupons, it may be desirable to enable the coupon only within certain geographic regions. For example, the grocery stores in one geographic region of a city may have an excess of watermelons. Rather than have them spoil and have to dispose of them, the grocer may desire to offer a discount on watermelons at these stores. The e-coupon could thus include such geographic information. The user's device can display the coupon when the user is within the prescribed region, but with the appropriate parameter settings the device could prevent display of the e-coupon if the user is not within the prescribed region. In this way, the grocer is able to advertise to the targeted customer base without offering the same discount in other regions where they do not have an excess of watermelons and the associated potential spoilage problem.

An important category of e-coupons to consider are those that require more control than can be had from just a simple expiration date. An example is an e-coupon that entitles the user to a free oil change. Even with an expiration date, the merchant likely would want more control such that the number of e-coupons could be controlled. In the existing practice of downloading and printing a coupon from a web page, the user could print as many copies as desired of the coupon. The copies could be passed along to others even though the merchant may have intended only the original recipient to receive the coupon.

One method of providing such control is to include a Redemption Code field in the e-coupon. This field contains a unique code assigned to this copy of the e-coupon. Any other user legitimately receiving this e-coupon from the merchant would have a different code. For redemption, the code would be entered into the redemption device. This would cause this code to be flagged as redeemed. If this code were to be entered again, it would not be accepted for redemption. The unique nature of the coupon and the associated value also enables the ability to transfer or exchange e-coupons with another user.

In another embodiment, the value associated with the e-coupon is not actually attached to the e-coupon itself. In this embodiment, the e-coupon is used as an indication to the user of the offer. The value for the e-coupon can be

resident in the system or in the merchant's computer system. The e-coupon that is sent to the user can be used by the user in much the same manner as in the previously described embodiments. The e-coupon can be displayed on the user's device at the user's request. This display can be contingent on other parameters such as time-of-day, geographic location, and others as previously explained.

For this method, there is no need to transfer the e-coupon from the user's device to the merchant's device. The merchant's device can connect to the merchant's computer or other system that has the value of the coupon. At time of redemption, the redemption can occur automatically based on the user purchasing the selected item. The computer system can directly record the event by flagging the coupon as having been used by this user. Alternately, the user's information profile could be updated to indicate the coupon has been redeemed. In another embodiment, the coupon could have been associated with the user's profile and could now be updated or removed.

Referring to the drawings, where like elements receive like reference numerals throughout, in FIG. 1 the process for redeeming an electronic e-coupon is illustrated. The process begins with the start of the redemption process (step 10). The e-coupon is connected with the redemption device or terminal at step 20. This can be a merchant terminal, another e-coupon storage device (for transfer or combination), by manual entry, or other similar device. The device and the e-coupon can be connected by hard connection synchronization, wireless system (e.g., cellular, bluetooth, IrDA, etc.), or through a barcode or other entry system. The method of determining the connection can be through an identification number and access ID that is contained in the e-coupon, or within the transmission standard for redemption devices.

The next step is in determining if the e-coupon is valid (step 30). This process is covered in more detail in FIG. 2. Still referring to FIG. 1, if the e-coupon is found to be valid, the e-coupon value is determined at step 40. This value could be monetary, time operation of a product, percentage reduction or increase, X for Y, or other values. This value is then delivered to the user of the e-

coupon or to the merchant. The process can use the signature of the e-coupon to provide a means to evaluate the usage of the offers, the demographics of the user, or other types of information.

The next area to be determined is finding out if the e-coupon is valid for one use only, or for multiple uses (step 50). If the e-coupon is valid for more than one use, limits on the number if uses is determined at step 60. The e-coupon can be determined to be an unlimited use within the valid parameters before expiration. An unlimited use event informs the user the e-coupon has been utilized at step 70. The routine is then exited through step 80.

Returning to the determination of the limits on the number of times the e-coupon can be used (step 50), the other option is to have a limit on the number of times (or amount of value) that the e-coupon can be used. The correct amount of use value can be removed from the e-coupon at step 90. A counter is then modified to count the number of uses, preferably by decrementing a counter in the e-coupon or at the main system in a manner similar to punches on a paper coupon. After the counter is modified to the correct amount, the user is notified at step 70, as previously discussed. The routine is then exited at step 80.

If it was determined that the e-coupon was a single use in step 50, then a unique feature of an e-coupon can come into play. The e-coupon vendor can instruct the e-coupon to remain in the users device to encourage a behavior in the future to reactivate the e-coupon. At step 100, the process determines if a vendor has chosen to do this option. If the option is enabled, the signature that makes the e-coupon valid is removed at step 110, but other content remains. The user is then informed of the method to reactivate the e-coupon at step 120. The process is exited at step 80.

The final path shown in the flow chart of FIG. 1 is to have a single use only e-coupon. The e-coupon is deleted in its entirety at step 130. Then the routine is exited at step 80. Those skilled in the art will appreciate that the exact order of the process flow shown in FIG. 1 can be altered without departing from the essential spirit and scope of the invention.

Referring next to FIG. 2 a flow chart of one presently preferred coupon validation routine is presented. The parameters to be verified will be presented as drawn, but the order is completely flexible since the linear flow requires all true responses to proceed to the conclusion of a validated e-coupon. Those skilled in the art will also appreciate that not all parameters will be used as the e-coupons have dynamic address and data spaces so the vendor has flexibility. The validation routine is entered at step 200. The routine then checks for a time expiration limit that has not been violated at step 210 . The time parameter can be a not valid prior to a specified time, not valid after a specified time, or a combination. The granularity of the limit can be minutes (a reward in an amusement arcade), days, months, years, or any combination. If the e-coupon is not in a valid time window, the validation routine exits and returns an invalid e-coupon to the redemption routine at step 290.

The next test is if the time of day is valid, which is performed at step 220. The e-coupon may only be valid during lull periods of a business, or when the vendor wants to control flow. Not all vendors will choose to use all control devices. If the fields are forced to exist, this requirement could be set to valid at all times. If the time is not valid, the validation routine exits and returns an invalid e-coupon to the redemption routine at step 290.

If it is found to be valid, the next test is if the vendor is valid at step 230. This can be used to prevent an e-coupon for one business being used by another. This step also gives the provider of the e-coupon more chance of the e-coupon being redeemed for the issuer's benefit, eliminating a "we accept all e-coupons" drain on the issuer. This also can be used to prevent a fraudulent redemption terminal from receiving an e-coupon. If the vendor is not valid, the validation routine exits and returns an invalid e-coupon to the redemption routine at step 290.

After verifying a valid vendor, the process flows to testing for a valid signature at step 240. The signature is a fraud control device to prevent modification, copying, invalid transferring, or other unwanted behaviors. The signature can contain checksums, value, vendor, and security codes. If the

signature is not valid, the validation routine exits and returns an invalid e-coupon to the redemption routine at step 290.

A valid signature will then flow to checking if the geography is valid at step 250. The geography will make only certain stores, regions, or events to be valid. In the presently preferred embodiment, location information is available in the e-coupon storage device or at the vendor redemption center. This is important in chains, stock imbalances, etc. If the geographic verification is invalid, the validation routine exits and returns an invalid e-coupon to the redemption routine at step 290.

Valid geography then flows to checking if there are any iterations left at step 260. This could be one iteration in a single use, or at least one iteration in a multi-use e-coupon, or unlimited iterations. If no iterations are valid, it could be due to the e-coupon having expired, and it being resident for a reminder to have a behavior to reactivate the e-coupon as discussed earlier. If the e-coupon has no iterations available, the validation routine exits and returns an invalid e-coupon to the redemption routine at step 290.

If there are iterations, a duration will be checked at step 270. The duration applies to services or values that are generally measured in time (e.g., phone minutes, tanning bed, etc.). If no time is remaining, the validation routine exits and returns an invalid e-coupon to the redemption routine at step 290. If time is remaining, then all controls have been satisfied, and the value can be released at step 280. This value is then delivered to the user of the e-coupon to the merchant. Since this was a unlimited use e-coupon, the event is over without any overt action to the user. The system can use the signature of the e-coupon to provide a means to evaluate the usage of the offers, the demographics of the user, or other types of information. The routine is then exited at step 300 with a valid e-coupon indication.

The e-coupon method preferably includes background routines that perform maintenance to assist the user, and assist in efficiency when time to redeem the e-coupon. One presently preferred flow chart for such background

routines is shown in FIG. 3 and begins at step 400. The first step 410 is to select the e-coupon to review. The selection could be based on many criteria including time since last review or use, the signature number, the earliest to expire, the one that is in a geographically valid region, or other method. The e-coupon is then run through the validation routine at step 420. If the e-coupon is not valid, the e-coupon can be tested to see if the cause is expired at step 430.

If the e-coupon has expired, the vendor is notified at step 450. This allows the vendor to automatically extend the e-coupon if the customer is using it regularly, and is valuable to the vendor. The vendor decides at step 480. If the e-coupon is to be extended then it extended at step 490. The user is notified of the extension at step 500. The routine then returns to step 410 to select another e-coupon base on a criteria as discussed earlier. If the vendor decides to not extend the e-coupon it can choose to leave the e-coupon as a reminder to the user that an action can be done to reactivate the e-coupon at step 510 . If the decision is to leave the expired e-coupon, the user is notified at step 520. The routine then returns to step 410 to select another e-coupon base on a criteria as discussed earlier.

If the e-coupon is to not to be kept as a reminder, then the user is notified that e-coupon is being removed at step 530. This prevents the user from expecting a valid e-coupon and being embarrassed. The routine then returns to step 410 to select another e-coupon base on a criteria as discussed earlier. Referring back to step 420, if the e-coupon is valid, then the customer is notified that the e-coupon is valid at step 440. This notification could be as simple as keeping the e-coupon in the device, or as overt as making an announcement that requires a response (not preferred) . The routine then returns to step 410 to select another e-coupon based on a criteria as discussed earlier.

If the e-coupon does not meet validation and is not expired, it is tested to see if the user is near a participating vendor at step 460. If he is not, the routine then returns to step 410 to select another e-coupon based on a criteria as discussed earlier. If the user is near a vendor, then the vendor is notified to see if an e-

coupon should be added to the user portfolio at step 470. The routine then returns to step 410 to select another e-coupon based on a criteria as discussed earlier.

Figure 4 shows an alternate embodiment where the vendor controls the redemption process, and the system provider only acts as a conduit for the e-coupon. The process flow begins as the transaction routine is entered at step 600. The vendor creates the transaction event (discount, price reduction, X for Y, etc.) and the target users (by name, demographic, location, etc.) at step 610. The vendor passes the information to the system provider of the event at step 620. The system then informs the correct users by presenting the transaction detail to them in e-coupon form at step 630.

The user then has the ability to initiate the transaction by purchasing at the vendor at step 640. Those skilled in the art will appreciate that this transaction does not require any transfer of information from the e-coupon to the vendor as the vendor will handle all verification and controls within their own accounting/computing services as shown at step 660. The verification may be in tracking a user for having made the/a purchase with the deal (tracked through telephone number, credit card number, etc.). At step 670 the vendor notifies the system that the transaction has been completed and is no longer valid. This can be for a global canceling/expiration, or for a specific user or class of user. At step 680 the system notifies the user and removes or updates the e-coupon. The routine is then exited at step 690.

It is to be understood that a wide range of changes and modifications to the embodiments described above will be apparent to those skilled in the art and are contemplated. It is therefore intended that the foregoing detailed description be regarded as illustrative, rather than limiting, and that it be understood that it is the following claims, including all equivalents, that are intended to define the spirit and scope of the invention.

WE CLAIM:

A method of enabling the use of electronic coupons in a wireless communication network comprising the steps of:

providing an electronic coupon to an end user; and

redeeming said electronic coupon at a retail location.

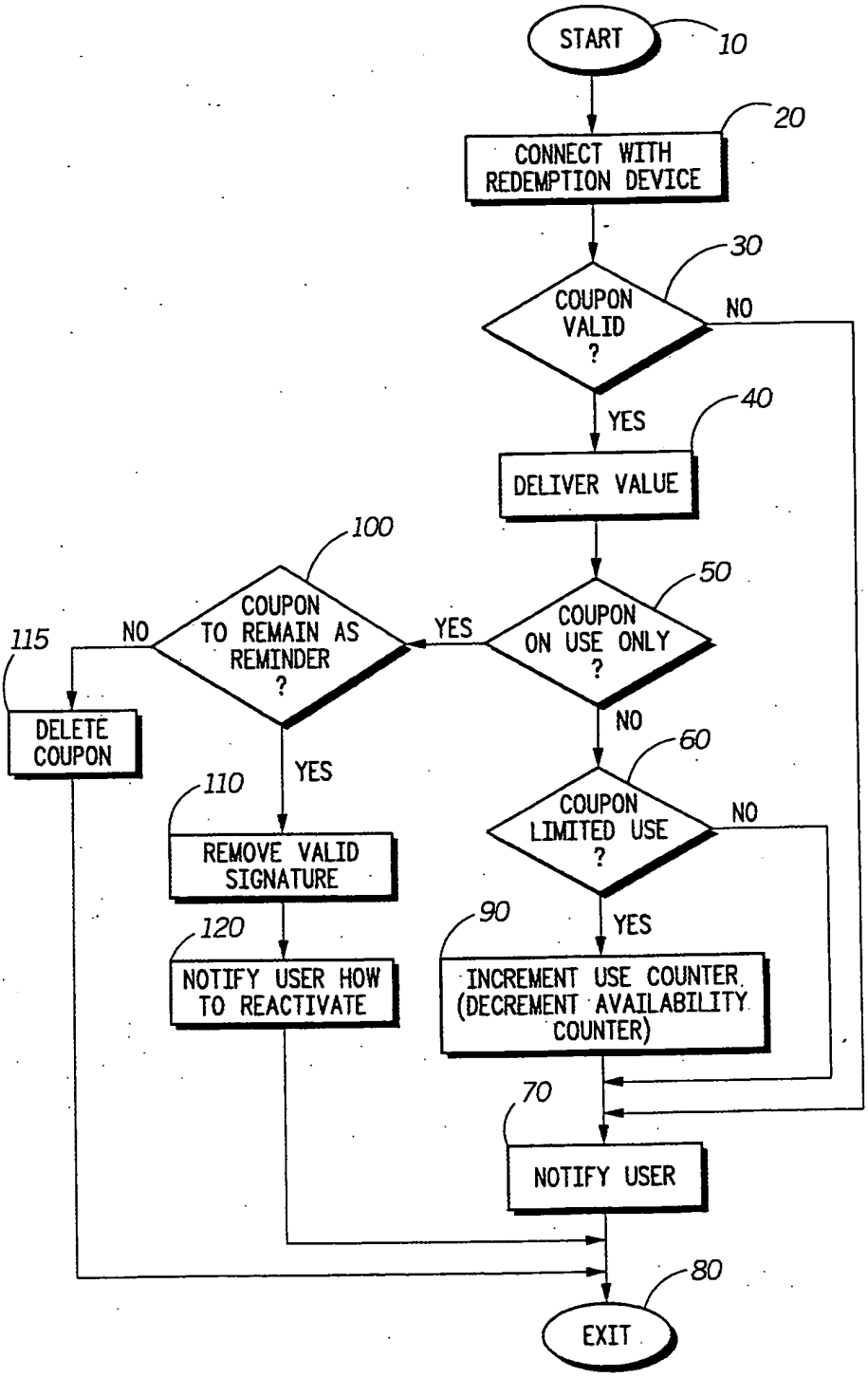

START
10
CONNECT WITH REDEMPTION DEVICE
20
COUPON VALID ?
30
NO
YES
DELIVER VALUE
40
COUPON ON USE ONLY ?
50
YES
NO
COUPON TO REMAIN AS REMINDER ?
100
NO
115
DELETE COUPON
YES
110
REMOVE VALID SIGNATURE
120
NOTIFY USER HOW TO REACTIVATE
NO
60
COUPON LIMITED USE ?
YES
90
INCREMENT USE COUNTER (DECREMENT AVAILABILITY COUNTER)
70
NOTIFY USER
80
EXIT

FIG. 1

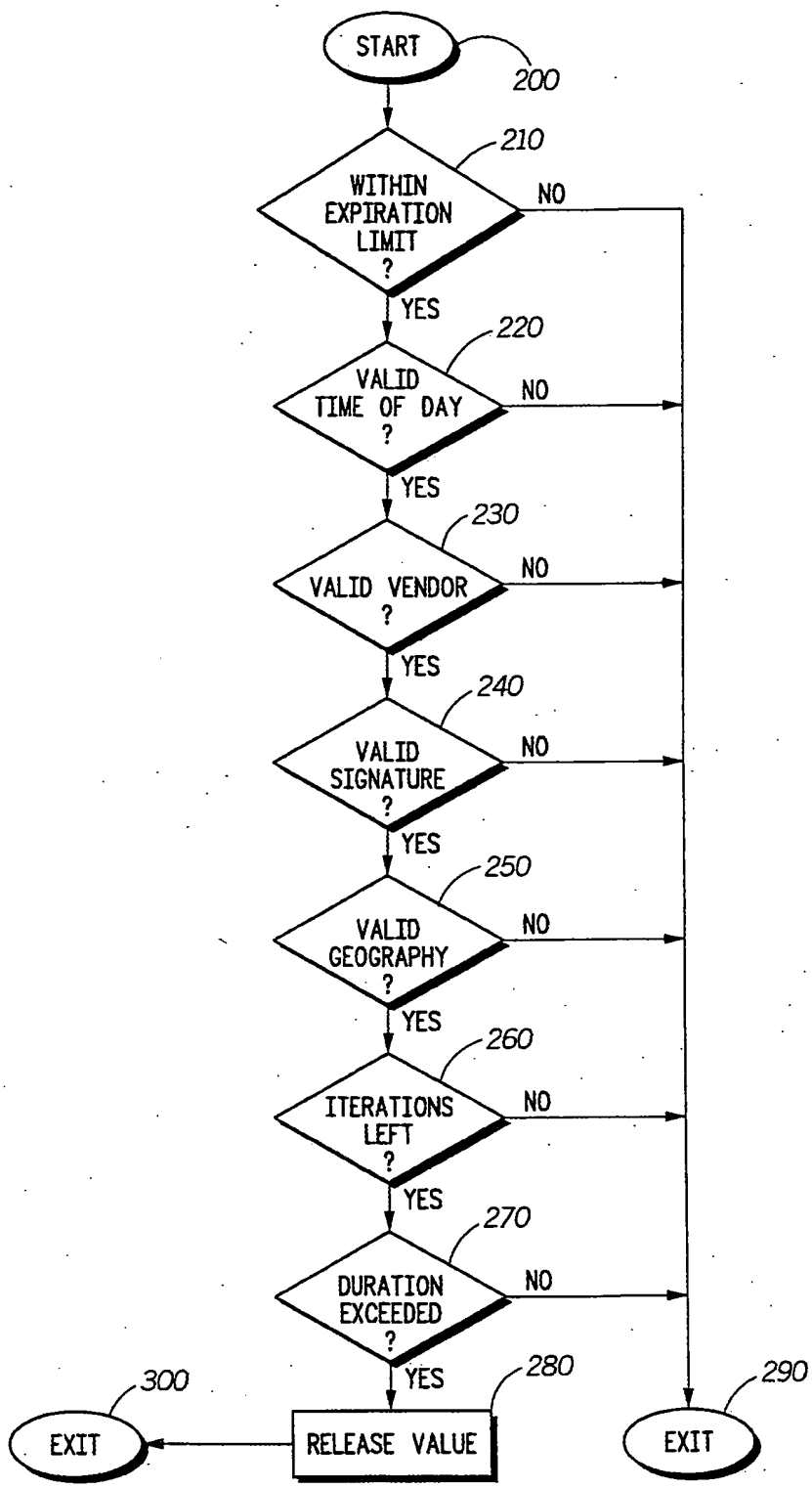

START
200
210
WITHIN EXPIRATION LIMIT ?
NO
YES
220
VALID TIME OF DAY ?
NO
YES
230
VALID VENDOR ?
NO
YES
240
VALID SIGNATURE ?
NO
YES
250
VALID GEOGRAPHY ?
NO
YES
260
ITERATIONS LEFT ?
NO
YES
270
DURATION EXCEEDED ?
NO
YES
280
RELEASE VALUE
290
EXIT
300
EXIT

FIG. 2

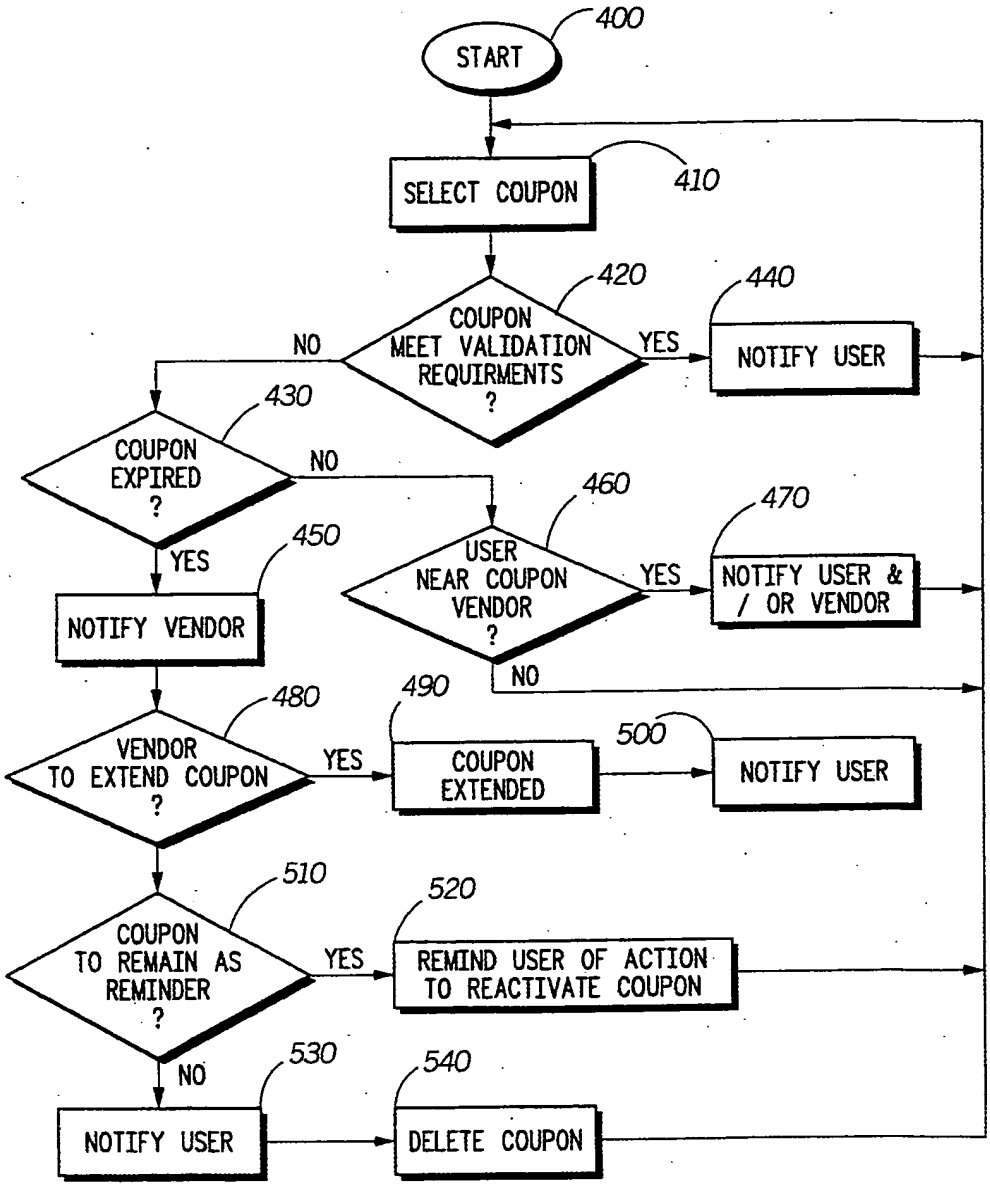

400
START
SELECT COUPON
410
420
COUPON MEET VALIDATION REQUIRMENTS ?
NO
YES
440
NOTIFY USER
430
COUPON EXPIRED ?
NO
YES
460
470
USER NEAR COUPON VENDOR ?
YES
NOTIFY USER & / OR VENDOR
450
NOTIFY VENDOR
NO
480
490
500
VENDOR TO EXTEND COUPON ?
YES
COUPON EXTENDED
NOTIFY USER
510
520
COUPON TO REMAIN AS REMINDER ?
YES
REMIND USER OF ACTION TO REACTIVATE COUPON
NO
530
540
NOTIFY USER
DELETE COUPON

FIG. 3

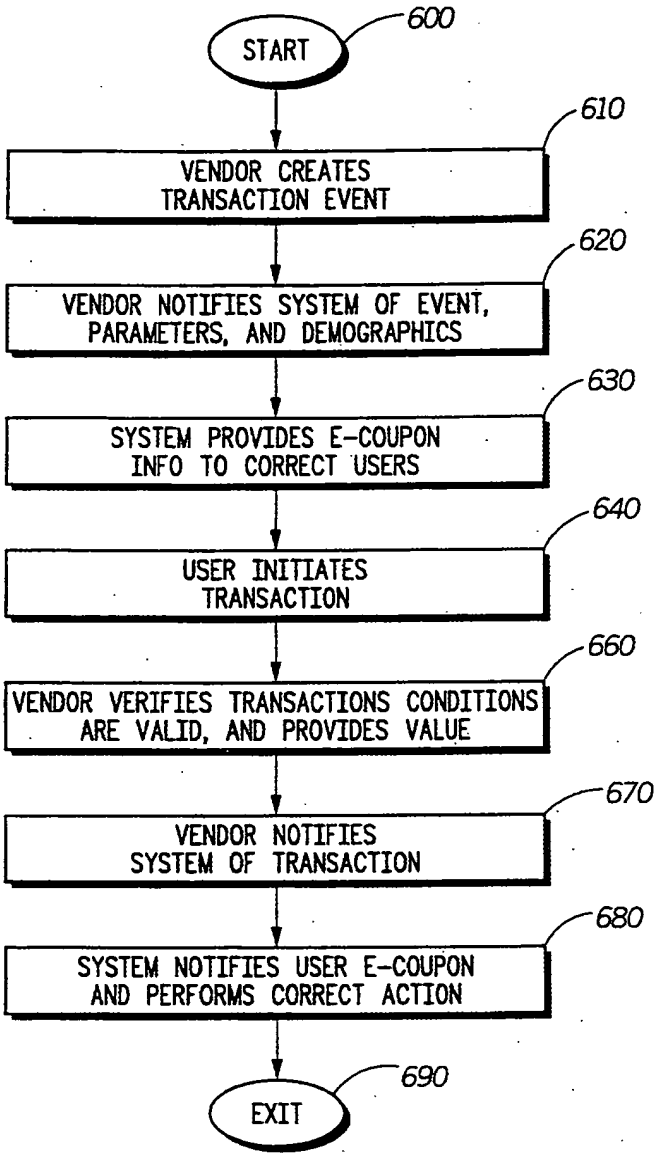

START
600
VENDOR CREATES TRANSACTION EVENT
610
VENDOR NOTIFIES SYSTEM OF EVENT, PARAMETERS, AND DEMOGRAPHICS
620
SYSTEM PROVIDES E-COUPON INFO TO CORRECT USERS
630
USER INITIATES TRANSACTION
640
VENDOR VERIFIES TRANSACTIONS CONDITIONS ARE VALID, AND PROVIDES VALUE
660
VENDOR NOTIFIES SYSTEM OF TRANSACTION
670
SYSTEM NOTIFIES USER E-COUPON AND PERFORMS CORRECT ACTION
680
EXIT
690

FIG. 4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/27539

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :Please See Extra Sheet.
US CL : 705/14, 26, 27

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/14, 26, 27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Please See Extra Sheet.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P	US 6,075,971 A (WILLIAMS et al) 13 June 2000, abstract, col 2 line 47-62	1
X	US 5,250,789 A (JOHNSEN) 05 October 1993, Abstract, entire document, col 7 l. 9-21	1
X	US 5,761,648 A (GOLDEN et al.) 02 June 1998, Abstract,entire document, especially col 1 line 1-col 3 l. 26, col. 1 lines 10-19	1
X	US 5,855,007 A (JOVICIC), 29 December 1998, abstract, entire document, col 5 l. 24-44	1
X	US 5,918,211 A (SLOANE) 29 June 1999, abstract, entire document, col. 2 l.59-col. 3 l. 11.	1

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report
03 NOVEMBER 2000	26 DEC 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer JAMES TRAMMELL James R. Matthews Telephone No. (703) 305-3900

Form PCT/ISA/210 (second sheet) (July 1998)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/27539

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,845,259 A (WEST et al) 01 December 1998, abstract, claims 1-6	1
Y	US 5,999,914 A (BLINN et al) 07 December 1999, abstract, entire document, especially col 6 l. 22-31	1
A	US 5,070,404 A (BULLOCK et al) 03 December 1991, Abstract, entire document	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/27539

A. CLASSIFICATION OF SUBJECT MATTER:
IPC (7):

IPC 7 G06F 17/60

B. FIELDS SEARCHED
Documentation other than minimum documentation that are included in the fields searched:

East Text search US class 455 and 701. Search terms used: remote users and analogous terms; coupons , incentives, promotions; wireless.